

REMARKS

No new matter has been added. The Applicant again requests entry of the amendments as set forth in the Appendices hereto prior to examination of the application on the merits.

Respectfully submitted,



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JRD/csw

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**VERSION OF SPECIFICATION WITH MARKINGS TO SHOW CHANGES MADE**

[0005] During an HF-last rinse of a semiconductor structure with exposed silicon, for example, a significant number of  $[(Si)2=O]$   $(Si)_2=O$  bonds are changed to Si-H bonds. About ten to twenty percent of the changed bonds, however, are Si-F instead of the preferred Si-H. During the industry standard DI water rinse that follows most chemical treatments, the Si-F bonds in this example are easily washed off, and oxidation of semiconductor materials, such as silicon, occurs while transferring the semiconductor structure from a rinsing vessel to a drying vessel. Oxidation can occur both during the transfer to the drying vessel and while the semiconductor structure resides in the drying vessel prior to drying.

**VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE**

1. (Amended) A method of cleaning a structure comprising:  
positioning a structure within an at least substantially enclosed treatment vessel;  
performing an etching process on a portion of said structure within said treatment vessel;  
substantially filling said treatment vessel with a gas inert to said structure and inert to said  
treatment vessel, creating an atmosphere of inert gas inside said treatment vessel;  
rinsing said structure with DI water in said atmosphere of inert gas;  
submerging said structure in a DI water bath in said treatment vessel[ having].[ ]said DI water  
bath forming a surface with said inert gas;  
forming a continuous layer of a liquid upon said surface of said DI water bath, said continuous  
layer of said liquid comprising an anhydrous liquid[.];  
contacting substantially all of said structure with said continuous layer of said liquid; and  
entraining said DI water bath below said continuous layer of said liquid.

2. (Amended) The method of cleaning a structure according to Claim 1, further  
comprising, prior to rinsing said structure with DI water[ bath], rinsing said structure in an  
aqueous HF solution.

4. (Amended) The method of cleaning a structure according to Claim 1, wherein  
said inert gas comprises nitrogen.

14. (Amended) A method of cleaning a polysilicon structure comprising:  
selecting a chemical etching process selected from a group consisting of rinsing said polysilicon  
structure in an aqueous HF solution, performing an HF dry etch on said polysilicon  
structure, and performing a polysilicon etch on said polysilicon structure;  
performing said chemical etching process upon said polysilicon structure within an at least  
substantially enclosed treatment vessel;

substantially filling said treatment vessel with a gas that is inert to said polysilicon structure and to said treatment vessel;  
providing an inert gas atmosphere inside said treatment vessel;  
rinsing said polysilicon structure with DI water in said inert gas atmosphere;  
submerging said polysilicon structure in a DI water bath in said treatment vessel;  
forming a surface between said DI water bath and said gas;  
forming a liquid layer at said surface [formed by]between said DI water bath[ surface] and gas,  
said liquid layer including alcohol; and  
separating said polysilicon structure from said DI water bath such that substantially all of said polysilicon structure passes through said liquid layer.

17. (Amended) The method of cleaning a polysilicon structure according to Claim 14, wherein said separating said [semiconductor]polysilicon structure from said DI water bath comprises drawing said polysilicon structure out of said DI water bath.

22. (Amended) A method of cleaning a structure comprising:  
performing a chemical reaction wet etching upon said structure within a single compartment of an at least substantially enclosed vessel;  
purging [the]said single compartment of said vessel with a gas;  
forming an inert gas atmosphere in [the]said single compartment of said vessel, said gas forming said inert gas atmosphere and being inert to said structure and to said vessel;  
contacting said structure with DI water;  
removing from said structure chemicals from said chemical reaction wet etching;  
maintaining said inert gas atmosphere in [the]said single compartment of said vessel by filling [the]said single compartment of said vessel using DI water;  
submerging said structure in [the]said single compartment of said vessel and contacting said DI water with said inert gas;

conveying an anhydrous organic vapor in a gas to said vessel, said anhydrous organic vapor selected from a group consisting of acetone, chloroform, methanol, carbon tetrachloride, benzene, ethanol, ethyl acetate, hexane, 1-propanol, and 2-propanol, said anhydrous organic vapor contacting a surface of said DI water to form a layer of said anhydrous organic [liquid]vapor thereon;

displacing said inert gas atmosphere with said anhydrous organic vapor, said anhydrous organic vapor contacting a surface of said DI water;

forming a layer of said anhydrous organic [liquid]vapor upon contact of said surface of said DI water by said anhydrous organic vapor; and

drawing said structure out of said DI water through said layer of said anhydrous organic [liquid]vapor with substantially all of said structure contacting said layer of said anhydrous organic [liquid]vapor.